

US EPA RECORDS CENTER REGION 5



471648

## MICHIGAN DEPARTMENT OF NATURAL RESOURCES

## INTEROFFICE COMMUNICATION

March 17, 1994

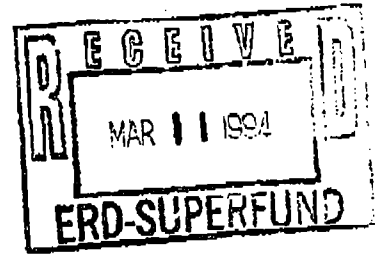
TO: Leah Evison, U.S. EPA  
Liz Bartz, WW Engineering and Science

FROM: Gene Hall  
Superfund Section  
Environmental Response Division

SUBJECT: Draft Work Plan for Test Pitting at the Albion-Sheridan Township  
Landfill Superfund Site, Calhoun County, Michigan

Enclosed please find a copy of the Draft Work Plan for the proposed test pitting in the landfill. I have put our staff on a fast track for review and comment. If you have comments, we would very much appreciate a response by Friday March 25, 1994. I will be sending our comments to our contractor by the end of this week or early next week. If your comments are not received by the time our contractor addresses our comments, we will find a way to work your comments into the second draft.

If you have any questions, please call me.



9403043L.WP/CR912  
8809-00

March 10, 1994

Mr. Gene Hall  
Environmental Response Division  
Michigan Department of Natural Resources  
300 S. Washington Square  
Lansing, MI 48909

Dear Mr. Hall

ABB Environmental Services, Inc. is pleased to submit for your review four copies of the draft Work Plan for the Albion/Sheridan landfill test pitting project. If you have any questions or wish to discuss the Work Plan, please call me at 810-489-8040. We look forward to working with you on this project.

Sincerely,

ABB ENVIRONMENTAL SERVICES, INC.

A handwritten signature in cursive script that reads 'Garrett E. Bondy'.

Garret E. Bondy, P.E.  
Site Manager

GEB/bw

Enclosure

ABB Environmental Services Inc.

**DRAFT**

**WORK PLAN  
TEST PITTING OPERATIONS  
ALBION SHERIDAN TOWNSHIP LANDFILL**

**OBJECTIVES**

A recent study conducted at the Albion-Sheridan Township Landfill (ASTL) site in Albion, Michigan, revealed several areas within the landfill where large, metallic objects may be buried. Other information obtained by the Michigan Department of Natural Resources (MDNR) suggests that drums, possibly containing industrial wastes, were buried at the ASTL between 1966 and 1981. The MDNR has requested that ABB Environmental Services, Inc. (ABB-ES) conduct a test pitting program in several of these anomalous areas to:

- (1) assess whether drums containing industrial wastes are present in significant numbers in concentrated areas (as opposed to sporadic occurrences in scattered locations); and
- (2) sample the contents of selected drums to evaluate whether they contain substances that may pose a significant threat to public health and the environment.

The following scope of work was developed in cooperation with the MDNR to meet these objectives.

**SCOPE OF WORK**

The following seven tasks will be performed by ABB-ES to assist the MDNR in meeting the project objectives:

**Task 1: Project Initiation/Work Plan Preparation**

This task includes all of the activities necessary for ABB-ES to initiate the ASTL project and to develop the project Work Plan. These activities include the review of background information, discussions with the MDNR project staff, and other project management activities. The Work Plan explains the scope, schedule, and estimated budget for the project and describes the methods to be used in implementing

future tasks. The Work Plan also assigns responsibilities to key project personnel.

Four copies of the draft Work Plan will be submitted to MDNR for review and comment. After receiving written comments, ABB-ES will make the appropriate revisions and submit seven copies of the final document. In preparing the project budget and schedule, it is assumed that revisions requested by the MDNR will be minor.

Tasks 2 through 10 will be initiated upon MDNR approval of the Work Plan and issuance of a contract release form (CRF).

#### Task 2: Quality Assurance Project Plan Preparation

The Quality Assurance Project Plan (QAPP) will describe the procedures to be used during this study to collect samples and conduct air monitoring. These procedures will assure that valid and appropriate methods are consistently applied toward achieving project objectives. The QAPP will not include procedures to be used by the MDNR laboratory, which will analyze samples collected from drums and any air monitoring samples which may require laboratory analysis.

The QAPP must be approved by MDNR prior to any on-site activity. In addition to a title page and a table of contents, the QAPP will conform to MDNR guidelines and will include the following 14 elements:

1. Project Description
2. Project Organization and Responsibilities
3. QA Objectives for Measurements
4. Sampling Procedures
5. Sample Custody
6. Calibration Procedures
7. Analytical Procedures
8. Internal Quality Control
9. Data Reduction, Interpretation, Validation and Reporting
10. Performance and System Audits

11. Preventative Maintenance
12. Data Assessment Procedures
13. Corrective Actions
14. Quality Assurance Reports

At the request of MDNR, these elements have been addressed in two separate volumes. Volume 1 contains information on project-specific elements. Elements that are generally applicable to all projects are addressed in Volume 2. Together, these two documents will comprise the QAPP for the ASTL site project. Volume 1 will be developed upon approval of this Work Plan and authorization to proceed by the MDNR. Volume 2 is on file with the MDNR, Environmental Response Division, in Lansing.

Four copies of the draft QAPP will be submitted to the MDNR for review and comment. After receiving written comments, ABB-ES will make the appropriate revisions and submit two copies of the final document. In preparing the project budget and schedule, it is assumed that revisions requested by the MDNR will be minor.

### Task 3: Health and Safety Plan Preparation

ABB-ES will review available data regarding contaminants likely to be present at the ASTL site and assess the potential hazards that may be encountered during the field activities. A site Health and Safety Plan (HASP) will be written in accordance with ABB-ES' Corporate Health and Safety Program and OSHA requirements to minimize the risk to project staff from potential chemical and physical hazards at the site. The HASP will include information on expected contaminants, a hazards evaluation, anticipated level of personal protection, decontamination procedures, a list of necessary monitoring equipment, monitoring procedures, air monitoring action levels and required response actions, and emergency procedures and phone numbers.

All personnel conducting field activities at the site will be required to read the HASP and must have satisfied the OSHA training requirements outlined in 29 CFR 1910.120. Based on available data, it is anticipated that Level B protection will be necessary during this project.

Because of the inherently dangerous nature of this assignment, an expert in health and safety issues will be present during the test pitting activities to ensure that the health and safety of on-site personnel is safeguarded at all times. It is anticipated that the Health and Safety Officer (HSO) will be provided by ABB-ES' Portland, Maine office. This will require the HSO to travel to Michigan from Portland, Maine.

Four copies of the HASP will be submitted to the MDNR for their review. Upon receipt of written comments, ABB-ES will make the appropriate revisions and submit two copies of the final document. In preparing the project budget and schedule, it is assumed that revisions requested by the MDNR will be minor.

A copy of the HASP will also be kept on-site during field activities.

#### Task 4: Mobilization

This task includes procurement of the test pitting contractor and mobilization of the field facilities and equipment that are required before test pitting can begin. It includes the establishment of site services and utilities. Based upon discussions with the MDNR, it is assumed that the MDNR will provide a temporary field office/storage trailer on the site during the field activities. The trailer will be installed near the existing entrance to the landfill to provide a central location for communications, shelter, office space, equipment storage, and related activities. The project budget includes the cost of having electricity and telephone services connected to the MDNR trailer. Based upon discussions with the MDNR, it is also assumed that a decontamination pad large enough to decontaminate the excavation equipment, and outfitted with a sump, exists at the site. Under this task, the test pitting contractor will mobilize necessary equipment and supplies. It is assumed that the test pitting contractor will deliver 50 overpack drums to the site.

Included in the mobilization task is the cost for ABB ES personnel to travel to the site to organize equipment, collect the background air monitoring samples and measurements described under Task 5, and prepare for test pitting. This task also includes the cost for the project HSO to travel from Portland, Maine to the site. It is assumed under this task that at least one MDNR representative will be present at the site to show ABB-ES personnel the areas to be test pitted. It is further assumed that during this task the MDNR will have marked in advance (using stakes or flags) those areas that are to be test pitted.

### Task 5: Test Pitting

This task includes test pitting, sampling of drums, staging of drums removed from the excavation and air monitoring. ABB-ES has assumed that at least one MDNR representative, outfitted in level B, will be present to observe all test pitting activities. The MDNR representative will select the areas to be test pitted, and will provide direction as to the extent of each test pit and which drums to sample. It has been assumed that the MDNR will make arrangements with the appropriate police, fire, and emergency response agencies.

It is anticipated that a track-hoe will be used to dig the test pits. At all times, the track-hoe will be operated in a manner to minimize the potential for rupturing buried drums. In beginning a test pit, the track-hoe will scrape the ground surface lightly to assess whether drums are present near the surface. If drums are found within 4 feet of the surface, an attempt to access them for sampling will be made using hand shovels or other tools, if practical. If drums are not found near the surface, the test pit will be expanded and made deeper. The test pits will extend to a maximum depth of 15 feet. Excavated bulk material will be stockpiled on plastic sheeting in discrete piles as it is removed. Upon completion of a test pit, stockpiled material will be sequentially replaced into the excavation. Each test pit will be backfilled prior to initiating another, and no test pit will remain open overnight. Upon completion of a test pit, another area will be test pitted as selected by the on-site MDNR representative.

If drums are encountered, an attempt will be made to sample the contents of selected drums using the following general procedures:

- Every attempt will be made to obtain samples without the removal of drums.
- No personnel will be allowed to enter a test pit that is deeper than 4 feet, which would be considered a confined space.
- When it is impractical to sample a drum in place, a drum may be removed from the excavation for ex-situ sampling, if it appears practical to remove the drum without releasing its contents.

- Drums removed from an excavation will be placed into DOT-approved overpack containers.
- Whenever possible, drums will be opened by removing the ring and lid or the bung to obtain a sample. If intact drums are removed from the excavation but cannot be opened by hand, a non-sparking puncturing device attached to the track-hoe will be used to remotely puncture the drum as it sits in the overpack.

ABB-ES will collect a sufficient amount of sample from each drum to accommodate the analytical methods specified by the MDNR laboratory. It is assumed that the MDNR will provide ABB-ES with the pre-prepared sample containers required for the analyses. ABB-ES personnel will prepare the samples for transport to the MDNR laboratory. ABB-ES has assumed that, upon completion of the field work, the MDNR on-site representative will transport the samples to the MDNR laboratory.

At the request of the MDNR, drums observed to contain liquid materials will be removed from the excavation, if the removal is not likely to result in a release of the drum's contents. In the event that a drum has been ruptured and spilled liquids are observed, to the extent feasible, the spilled liquids and the ruptured drum will be removed and placed into overpack containers. If the drum cannot be removed without causing a larger release, then it will be left in place. If the drum is damaged to the extent that it will not readily fit into an overpack, the drum will not be removed from the excavation.

Removal of drums will be accomplished using either the track-hoe bucket alone, a chain in conjunction with the bucket, or a separate track-hoe equipped with a grappling device. The project budget assumes that both a track-hoe for excavating and a track-hoe equipped with a grappling device will be on-site. Any overpacking activities will be conducted off to the side of the excavation over plastic sheeting.

It is ABB-ES' understanding that overpacking the drums removed from the excavation will comply with current Federal and State regulations for containment. Overpack containers will be staged on the ground near the test pit excavation. The containers will be labeled using a system that will identify the excavation area and the order in which they were removed. The field notes will include the same label for each drum and a description of the area and surrounding materials in the excavation from which the drums were removed. The date on which the drums were excavated will also be marked on the overpack containers. It is ABB-ES' understanding that the MDNR will dispose of the overpacked materials using



funds from a separate budget.

During test pitting activities, all personnel within the exclusion zone will be outfitted in Level B personal protection equipment (PPE). Prior to initiating each test pit, exclusion and contaminant reduction zones will be clearly defined. The site-specific HASP will outline zonation requirements in further detail.

Air monitoring will also be conducted at the site during test pitting. ABB-ES proposes that the air monitoring program consist of the following:

- Collection of background measurements prior to the initiation of test pitting using a photoionization detector (PID) to measure total volatile organic compounds (VOCs), a respirable dust monitor (RDM) to measure dust levels, and radiation, hydrogen sulfide and cyanide meters;
- Collection of compound specific background samples at four locations along the site perimeter (to be analyzed only if compound specific monitoring is required during the test pitting activities) using carbon adsorption tubes and air sampling pumps;
- Hourly meteorological observations (air temperature, wind direction, and approximate wind speed);
- Personal exposure monitoring for VOCs using passive sampling badges for those on-site personnel working inside the exclusion zone.
- Ambient air monitoring within the exclusion zone using a PID, RDM, a combination lower explosive limit/oxygen meter, a radiation detector, and cyanide and hydrogen sulfide meters;
- Exclusion zone perimeter monitoring for total VOCs and particulates using a PID and an RDM; and
- Hourly downwind site perimeter monitoring for total VOCs using a PID and particulate monitoring using an RDM.

The equipment necessary to perform compound specific air monitoring at four locations along the site perimeter will also be available. Such monitoring could be necessary if the action level(s) to be included in the HASP are exceeded. While compound specific monitoring is not expected to be necessary, additional personnel may be required on-site to conduct such monitoring and an increase in the project budget would be necessary.

#### Task 6: Demobilization

This task includes decontaminating and removing the equipment used for the test pitting. Fluids used for decontamination will be drummed and staged near the decontamination pad. It is ABB-ES' understanding that the MDNR will dispose of the drummed fluids using funds from a separate budget. The budget for this task also includes the cost associated with disconnecting the telephone and electricity. It is assumed that the MDNR will remove the temporary field office/storage trailer. This task includes the cost of the project HSO to return to Portland, Maine.

#### Task 7: Analytical Program

Based upon discussions with the MDNR, it is assumed that samples collected from drums, the passive personal monitoring badges and any compound specific samples will be analyzed by the MDNR laboratory. Costs for these analyses are not included in this Work Plan.

It is assumed that samples from drums and from any required compound specific air monitoring will be analyzed for VOCs, semivolatile organic compounds, pesticides, polychlorinated biphenyls, and selected metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver and zinc), and that the personal monitoring badges will be analyzed for VOCs. It is further assumed that the MDNR laboratory is equipped to analyze all of these types of samples. No data validation will be performed by ABB-ES.

Quality control samples will be submitted with samples collected from the drums for analysis. It is assumed that duplicate samples will be submitted for all parameters specified at a level of 10 percent. It is further assumed that matrix spike/matrix spike duplicate samples will be collected for each matrix at a rate of 5 percent. Because the samples collected from drums will be considered high concentration

samples, no trip blanks will be included with these samples.

It is assumed that duplicates of compound specific air monitoring samples, should they be collected, will also be submitted at a rate of 10 percent. No quality control samples of personal monitoring badges will be submitted.

#### Task 8: Reporting/Documentation

Samples submitted for laboratory analysis will be documented on ABB-ES' standard field sampling forms. ABB-ES will also complete a brief daily activity log to summarize activities completed for each day that field work takes place. In addition, ABB-ES field staff will maintain a log book of field activities completed by ABB-ES and its contractors during the project.

ABB-ES will also write a technical memorandum which summarizes the field work and presents pertinent observations made during the test pitting. The memorandum will not present the analytical results for samples collected from drums and from the air monitoring. Copies of ABB-ES' standard sampling forms, the daily activity logs, and the log book will be included as appendices to the technical memorandum.

Two copies of the draft technical memorandum will be submitted to the MDNR for review and comment. After receiving written comments, ABB-ES will make the appropriate revisions and submit three copies of the final document. In preparing the project budget and schedule, it is assumed that revisions requested by the MDNR will be minor.

Due to the anticipated short duration of the project, interim status or progress reports will not be prepared by ABB-ES.

#### PROJECT ORGANIZATION AND MANAGEMENT

As prime contractor, ABB-ES will provide the overall project management and technical supervision on the project and will have a primary responsibility for successful completion of the project.

As the Program Manager, Michael O'Hearn, P.E., will be responsible for coordinating and monitoring the performance of the Site Manager and other project staff with regard to the technical, legal, and administrative requirements of the contract and site-specific agreements. Mr. O'Hearn will confer regularly (e.g., biweekly) with the project team to review project status, ensure commitments are met, and to identify problems or potential problems to be addressed. The Program Manager will also review all invoices and project deliverables prior to submittal to MDNR, and communicate with the MDNR and with subcontractors on selected project issues. Mr. O'Hearn will be supported in this role by Project Assistant, Beverly Waack.

Garret Bondy, P.E., will be the Site Manager for the ASTL project. The Site Manager is the primary contact between MDNR and the project team on issues relating to the project scope, schedule, budget, and technical issues. Administratively, his responsibilities are to ensure that the project is proceeding on schedule and that the budgets for the various tasks are maintained. Mr. Bondy will also have responsibility for technical direction of the investigation and coordination within the various technical disciplines required to complete the project.

As Field Operations Leader, Craig Kielty will be responsible for successfully implementing the field program. He will direct all field activities and monitor work performed by the subcontractors. Because of the significance of health and safety issues in a project of this type, Mr. Kielty will be supported in the field by a separate Health and Safety Officer (HSO). The HSO is responsible for developing the HASP and ensuring that the project team complies with requirements of the HASP. Mcg MacLeod from ABB-ES' Portland, Maine, office will serve as the HSO for this project.

Technical Review for the project will be provided by Kim Kesler-Arnold, C.P.G., and Matthew D. Jerue, P.E. Both are experienced in conducting test pitting and characterizing drummed wastes at landfill sites.

Resumes for all key project personnel are on file with MDNR, Environmental Response Division, in Lansing.

### 3.2 PROJECT MANAGEMENT

ABB-ES will utilize computerized management information systems to assist in the overall management

of the project and to track project and work assignment schedules, budgets, and manpower requirements. Through the use of these systems, monthly invoices will be submitted to MDNR. During field activities, costs will be estimated on a daily basis to ensure that projects costs do not exceed the authorized funds.

To monitor manpower utilization, separate activity codes will be assigned to track labor costs for each major task of the project. ABB-ES will not segregate costs in any way other than by task. If MDNR requires an alternate cost segregation scheme, it must be requested prior to Work Plan approval.

### PROJECT SCHEDULE

The ASTL project is expected to require approximately 17 weeks to complete following MDNR approval of the Work Plan and issuance of a CRP (see attached Project Schedule). It is expected that site work will be initiated within 6 weeks of receiving the CRP.

The schedule is based on the scope of work described previously and the following assumptions:

- MDNR will provide access to the site and surrounding properties as necessary for ABB-ES and its subcontractors to conduct the work.
- Field work will not be delayed by inclement weather (or other unforeseen circumstances beyond ABB-ES' control).
- The MDNR will install the site trailer at least two weeks in advance of mobilization.
- MDNR review time will not exceed 2 weeks for the draft Work Plan, QAPP, and Technical Memorandum.
- Establishment of electrical and telephone service to the site trailer will not be delayed by the public utilities involved.

Significant delays in the project schedule beyond the control of ABB-ES may require a commensurate increase in the project budget due to costs for time related activities such as project management functions.

### PROJECT BUDGET

The total estimated cost of the program described in this Work Plan is \$96,039. A budget of \$59,100 has been established for the field work, which consists of the mobilization, test pitting and demobilization tasks. At an estimated daily cost for test pitting of \$10,300, ABB-ES estimates that this budget will allow approximately three days of test pitting. Because the level of effort to be spent test pitting in each area is unknown, it is not possible to estimate the number of areas that can be test pitted for the budgeted amount. To maximize the time allowed for test pitting, ABB-ES will track expenditures in the field on a daily basis. The test pitting work will continue until either the budgeted amount is reached or the MDNR requests that the work cease, whichever occurs first.

Total labor hours for ABB-ES have been estimated at 787. A completed OF-60 for ABB-ES and an estimate of subcontractor costs (to be billed as other direct costs) are included at the end of this section along with detailed labor cost information for ABB-ES. Table 1 presents estimated labor hours by task. A summary of other direct costs is provided in Table 2. Table 3 summarizes budget information including labor costs, other direct costs, and fee.

This budget breakdown is for estimating purposes only. The actual costs for each task may vary from these estimates, and surplus project funds resulting from cost savings achieved in one task may be applied to another task as long as the total project budget is not exceeded. ABB-ES will not exceed the budget established in the approved Work Plan without the written authorization of the MDNR.

The project budget is based on the scope of work described previously and the following assumptions:

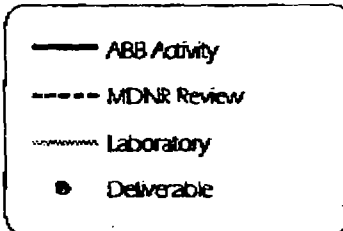
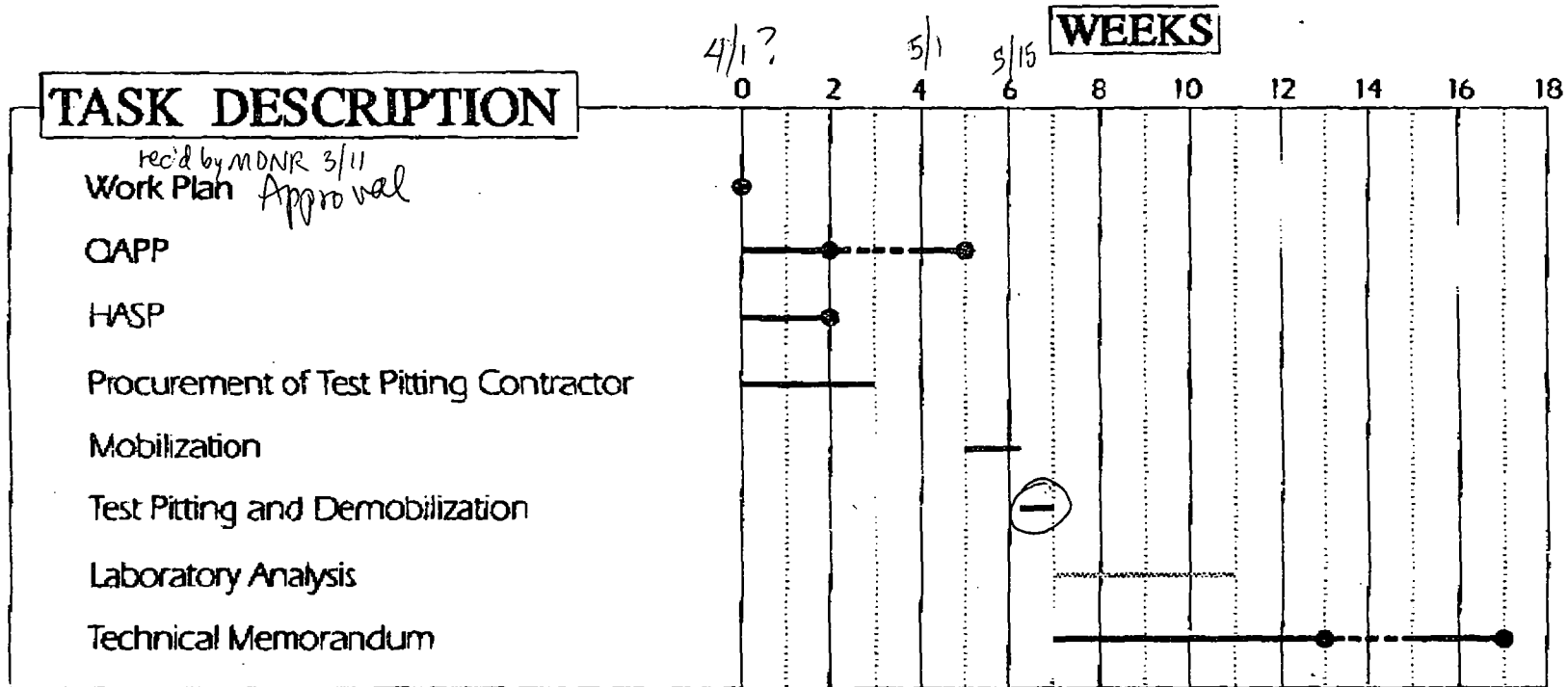
- MDNR is responsible for providing access to all portions of the site or adjacent properties as necessary for ABB-ES and its subcontractors.
- Access to all test pit locations can be gained with track-mounted excavating equipment, and no clearing or road building will be required.
- Level B personal protection will be required for test pitting operations.

- MDNR will provide one representative qualified to work at Level B to assist with and direct test pitting operations in the field.
- MDNR will provide two-way radios for on-site communications during test pitting operations.
- MDNR will provide an office/storage trailer for use by ABB-ES and subcontractors during the field work.
- MDNR will mark the locations of areas to be excavated in the field two weeks in advance of the test pitting operations.
- MDNR will provide all required laboratory services and pre-prepared sample bottles.
- The excavation subcontractor will provide the air supply for all personnel working within the exclusion zone.
- Any drums, wastes, or soils that are removed from the excavations will be containerized and left on site for subsequent disposal. ABB-ES is not responsible for the disposal of these materials.
- Decontamination fluids and used PPE will be containerized and left on-site for subsequent disposal. ABB-ES is not responsible for the disposal of these materials.
- Normal soil conditions will be encountered with no dewatering required, and excavations will not exceed 15 feet in depth.
- MDNR is responsible for clearing underground public utilities with Miss Dig.
- Compound specific air monitoring will not be required during test pitting activities.

Other assumptions applicable to specific tasks may be presented in the appropriate tasks descriptions. Significant deviations from these assumptions may make it necessary to adjust the project budget (and/or schedule). In addition, the project budget is based on our current MDNR-approved rates which may

change during the project. ABB-ES will invoice MDNR for services provided during this project using the approved rates in effect at the time of performance. This may require an adjustment to the authorized project budget during the course of the project.





**NOTE:**

Timeline starts at receipt of Contract Release Form

**PROJECT SCHEDULE**  
MDNR - ALBION LANDFILL  
ALBION, MICHIGAN

ABB Environmental Services, Inc.

**TABLE 2**  
**SUMMARY OF OTHER DIRECT COSTS**  
**ALBION-SHERIDAN LANDFILL**  
**ALBION, MICHIGAN**

<b>TRAVEL:</b>		<b>\$1,640</b>
Vehicle Charges	\$534	
Per Diem	\$706	
Airfare	\$400	
<b>EQUIPMENT:</b>		<b>\$1,890</b>
Hnu Pl Meter	\$520	
LEI/02 Meter	\$120	
Air Monitoring Equipment	\$1,250	
<b>OTHER:</b>		<b>\$29,739</b>
Telephone	\$448	
Auto Drafting	\$26	
Postage/Shipping	\$250	
Photocopying/Reproduction	\$265	
Miscellaneous	\$400	
Expendables	\$900	
Test Pitting Excavator	\$26,200	
Site Facilities	\$1,250	
<b>TOTAL:</b>		<b>\$33,269</b>

**TABLE 1**  
**BREAKDOWN OF LABOR HOURS**  
**ALBION-SHERIDAN LANDFILL**  
**ALBION, MICHIGAN**

TASK	Professional				Technical			Secretary/ Clerical	Task Total
	4	3	2	1	3	2	1		
1 PREPARE WORK PLAN	0	103	80	0	25	0	0	0	208
2 PREPARE QUALITY ASSURANCE PROJECT PLAN	0	27	35	0	11	0	0	0	73
3 PREPARE HEALTH AND SAFETY PLAN	0	42	6	0	12	0	0	0	60
4 MOBILIZATION	0	39	48	4	8	0	0	0	99
5 TEST PITTING	0	65	72	0	24	0	0	0	161
6 DEMOBILIZATION	0	21	20	0	8	0	0	0	49
7 ANALYTICAL PROGRAM	0	0	0	0	0	0	0	0	0
8 PREPARE TECHNICAL MEMORANDUM	0	40	70	0	27	0	0	0	137
<b>TOTAL HOURS BY LEVEL</b>	<b>0</b>	<b>337</b>	<b>331</b>	<b>4</b>	<b>115</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>787</b>

**TABLE 3**  
**BUDGET SUMMARY BY PHASE**  
**ALBION-SHERIDAN LANDFILL**  
**ALBION, MICHIGAN**

TASK	HOURS	LABOR (1)	COSTS (\$)			TOTAL
			OTHER DIRECT COSTS	SUBCONTRACTOR	FEE (2)	
TASKS 1 THROUGH 8	787	\$54,039	\$33,269	\$0	\$8,731	\$96,039

(1) Direct labor and overhead

(2) Sum of fees on direct labor and overhead, other direct costs, and subcontract costs